(c) Detailed bathymetric data would be generated which will be useful in oceanographic research, resource evaluation and shall help in understanding the geomorphic evolution of the Indian coasts and continental shelf.

(d) The programme is likely to commence during 2002-2003.

National Mission on Bamboo applications

5510. DR. C. NARAYANA REDDY:
SHRI C. RAMACHANDRAIAH:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact that Government propose to launch a National Mission on Bomboo Applications;

(b) if so, the details thereof;

(c) by when it is likely to be launched; and

(d) what are the targets being fixed?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) to (d) A National Mission on Bamboo Applications (NMBA) is proposed to be launched in the current year by the Technology Information, Forecasting and Assessment Council (TIFAC). The Mission is intended to focus on the development and promotion of value-added applications, technologies and markets, utilising the country's considerable resources of bamboo. The Mission aims to catalyse and generate economic activity in this sector and facilitate employment and income generation, in particular in rural areas. Preliminary assessments indicate that incremental value addition of several hundreds of crores is capable of being realised through such an intervention.

Research activities in Antarctic Region

5511. SHRI C. RAMACHANDRAIAH:
DR. C. NARAYANA REDDY:

Will the Minister of OCEAN DEVELOPMENT be pleased to state:

(a) whether it is a fact that Government propose to enhance research activities at Antarctic Station;

(b) if so, what are the new activities proposed to be taken up; and

(c) what are the achievements made during the last three years in Antarctic Research Programme?

THE MINISTER OF OCEAN DEVELOPMENT (DR. MURLI MANOHAR JOSHI): (a) and (b) Yes Sir. The scientific activities are proposed to be enhanced/initiated at Indian Station during the XXII Indian Antarctic Expedition. They are, use of Multi Scanning Multispectral Radiometer data to study the changes in ice cover over Antarctic region especially around Indian Station and assessment of ice sheet thickness using Ground Penetrating Radar to undertake ice core drilling. The ice core studies are useful to understand paleo-climate of Antractica.

(c) Achievements made during 1998-99 (18th Expedition) were: installation of Brewer spectrophotometer to measure total ozone, SO^2, NO^2 and UV; mapping of intensity of seasonal variation of geomagnet c field and total magnetic field; installation of two Automatic Weather Station with DCP; recording of 360 seismic events using digital seismometer integrated with GPS; recording of lateral plate movements on mm scale using GPs; recording of various surface energy flux on an annual basis with energy loss estimated as 45 W/sqm and installation of two prototype wind machines.

Achievements made during 1999-2000 (19th Expedition) were: launching of expedition from South Africa for first time resulting into operational, scientific and economic gains; real time analysis of VLF Whistlers; establishment of permanent environmental lab at Maitri; detection of waste water contamination of permafrost; recording of presence of exogenous pollen grains on lake sediments dated back to 10000 years; interfacing of seismic station with international Antarctic network and recording of several new species of low grade flora and fauna.

Achievements made during 2000-2001 (20th Expedition) were: establishment of a 3-station triangulation experiment and simultaneous magnetic recording to understand the dynamics of the auroral current systems; measurement of atmospheric electrical parameters near the Kamat Hut at Maitri to study the global electric circuit; continuous

observation on the weather pattern, atmospheric pressure, surface ozone and global solar radiation at Maitri; continuous recording of VLF propagation data by digital audio recorder PCM-R300 and geological mapping in the Muhlig-Hoffmannfjell area which revealed charnockite. The snow grain identification studies indicated predominantly sugary grains at Veteiah, Shivling and Russian Aerodrome site.

Indo-US Vaccine Action Programme

5512. SHRIMATI AMBIKA SONI: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the United States of America has agreed to continue with the Indo-US Vaccine Action Programme for another five years;

(b) if so, whether it has been decided that more emphasis would be given for development of Malaria, TB, HIV and Typhoid vaccines;

(c) whether this decision was taken during the two-day meeting of the Indo-US Science Forum which was held on 19th March, 2002; and

(d) if so, what are the other decisions taken in the meeting?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) In principle, it has been agreed at the level of Joint Working Group (JWG) of the Indo-US Vaccine Action Programme (VAP) to extend the programme for a further period of five years. Procedural formalities are being completed. The US side has conveyed its agreement.

(b) A Strategic Plan Document prepared by the experts has given emphasis on the development of vaccines for HIV/AIDS, tuberculosis and malaria.

(c) No, Sir.

(d) The Governing Body meeting of Indo-US S&T Forum held in March, 2002 discussed issues pertaining to administrative and scientific matters like holding of Joint workshops, Forum Frontier Fellows Programme, Invited Lectures and Creation of Databases.